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NEW SOVIET METHOD FOR TREATMENT OF BURNS

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Burns resulting from exposure of the body to strong heat are dangerous and do not heal readily.

Lesion of the skin, a most sensitive organ, causes overstimulation of the nerve endings and leads to a disturbance of the regulatory function of the central nervous system. This disturbance, in turn, causes the disruption of all the vitally necessary functions of the organism, i. e., it induces a state of shock.

Up to now, the attention of surgeons in the treatment of extensive burns has been directed primarily toward the control of possible infection. Victims of burns have subjected to complex initial surgery, even though the repeated trauma inflicted upon the victim by removing the affected parts of the outer layer of the skin intensifies the hyperstimulation of the nervous system, which in turn considerably hinders the fight of the organism against infection.

A new comprehensive method of treating burns has been devised by a group of scientific workers under the direction of G. D. Vilyavin, Doctor of Medical Sciences at the Surgical Institute imeni A. V. Vishnevskiy, Academy of Medical Sciences USSR.

The theory of nervism of the great Russian physiologist I. P. Pavlov is based on the principle of restoring the functions of the central nervous system by eliminating or alleviating pain stimuli. Proceeding from that theory, the scientists at the institute reduced to a minimum the amount of initial surgery of the affected area of burn victims by limiting themselves to the necessary removal of contaminated parts of the skin.

The burned areas of the skin are carefully and gently washed with water and a weak solution of novocain. This prevents the secondary stimulation of nerve endings during surgery. Moreover, the outer skin layer (epidermis) which is preserved protects the wound against stimulation and the penetration of infective agents. Experience has shown that, as a rule, no purulence develops under the epidermis in such cases.

After the initial treatment, the victim is swathed in bandages containing penicillin and Vishnevskiy's salve.

When skin lesions are extensive, i. e., cover more than 10 percent of the body surface, and in shock conditions, a novocain block is applied to lower the pain reflexes and to control the increased permeability of the vascular walls which may lead to a serious loss of blood and plasma. In such cases, 180-200 cc of a 0.25-percent solution of novocain is injected into the adipose capsule of the patient.

In shock conditions, a number of other measures besides the novocain block are used to improve the general condition of the patient. Blood and plasma transfusions are carried out, and physiological salt solution, glucose, and various cardiac stimulants are administered. The novocain block, in addition to lowering pain, contributes to the normalization of the permeability of the vascular walls, raises the tonus of the blood vessels, equalizes blood pressure, and eliminates inflammatory edema. This rapidly alleviates the patient's shock condition and prevents blood clotting and poisoning of the organism (toxemia).

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Protracted sleep also occupies an important place in the complex of measures designed to treat burns. For 3 or 4 days, the patients take nembutal or barbamyd powders and, as a result, they sleep from 15 to 18 hours a day.

The control of infection and of the depletion of protein in the organism is very important. For this purpose, the patient is given penicillin injections, repeated blood and plasma transfusions, and intensified protein feeding.

In extensive and deep third-degree burns, early plastic skin surgery is performed, and surface skin sections measuring 200-400 square centimeters are transplanted from unaffected parts of the body. Plastic surgery reduces the period of therapy, prevents the formation of scars and pits, and eliminates ankylosis.

The mortality rate during the shock and toxemia period has been sharply reduced as a result of this new method of treating burns. Although it was previously believed that burns covering more than 40 percent of the body surface could not be healed, burns covering up to 65 percent of the skin surface are now healed successfully. The comprehensive method of treatment which has been described markedly reduces complications, shortens the therapy period, and ensures restoration of the working ability of patients suffering from burns.

The new method of treating burns will find wide application in medical practice in the various medical institutions of the country.

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